

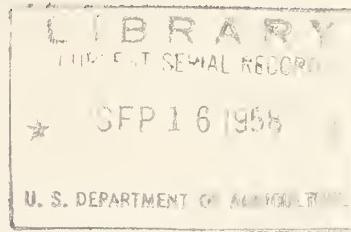
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UNITED STATES DEPARTMENT OF AGRICULTURE  
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COTTON FIBER AND PROCESSING TEST RESULTS  
CROP OF 1958

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Fiber and spinning test results contained in this report include cottons representing early and midseason lots from the lower Rio Grande Valley and Coastal Bend areas of Texas. As a general rule, these test results are on about the same level as those reported for the 1957 crop during this same period. The grades of the lots received from this area thus far are slightly higher than those reported last year. Average picker and card waste is likewise noticeably less than was the case in 1957. There is also a slight tendency for the nep count to be higher and the yarn appearance grades to be correspondingly lower for the 1958 cottons as compared with 1957.

Empire and Stoneville 7 are two varieties tested in the area this year which were not included in the 1957 Survey. The Empire variety is averaging slightly above one inch in staple length, with a Micronaire reading of 4.2, and a tensile strength of 81 thousand pounds per square inch. The Stoneville 7 variety is running slightly less than one inch in staple length, about 4.7 Micronaire reading, and 78 thousand pounds per square inch in fiber strength. Test results on these varieties are not in sufficient quantities to make valid comparisons with other varieties grown in the same area at this time.

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Prepared in the Standards and Testing Branch

Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, Crop of 1958

Variety	Delfos 9169		
State	Texas		
Market area	Edinburg		Corpus Christi
Percentage of variety at gin	60		80
Period of harvest	Early	Midseason	Midseason
RAW COTTON QUALITY	:	:	:
Classification (official standards)	:	:	:
Grade-----designation:	SM	SM	SM
Staple length-----inches:	1-1/16	1-1/16	1
Fiber length (Fibrograph):	:	:	:
Upper half mean-----inches:	1.04	1.09	.98
Uniformity-----ratio:	79	83	80
Fiber fineness and maturity:	:	:	:
Micronaire-----reading 1/:	4.7	4.6	4.4
Fineness (Causticaire)---ug/inch 2/:	4.4	4.6	4.4
Maturity ( " )-----index:	80	80	79
Fiber tensile strength (Pressley):	:	:	:
Zero Gauge-----1,000 p.s.i.:	80	81	84
" " -----grams per tex 3/:	39.6	40.1	41.6
1/8" " " " " :	21.2	21.6	20.3
Nonlint content: 4/	:	:	:
Visible waste-----percent:	0.6	1.1	1.2
Invisible waste-----" :	0.9	1.0	1.0
Total nonlint content-----" :	1.5	2.1	2.2
Color of raw cotton: 5/	:	:	:
Reflectance-----Rd:	78.3	78.7	78.5
Yellowness-----+b:	8.8	9.1	8.8
Sugar content-----percent:	0.3	0.3	0.6
Acid-alkaline value-----pH units 6/:	7.2	7.0	7.0
PROCESSING RESULTS	:	:	:
Manufacturing waste:	:	:	:
Picker and card waste-----percent:	7.5	7.3	7.5
Neps-----per 100 sq. in. of card web:	13	20	14
Yarn skein strength:	:	:	:
22s (26.8 tex)-----pounds:	114	119	111
50s (11.8 " )-----" :	39	43	38
Average break factor-----7/:	2229	2384	2171
Yarn appearance:	:	:	:
22s (26.8 tex)-----grade:	B	C+	C+
50s (11.8 " )-----" :	C	C	C
Average yarn appearance----index 8/:	100	95	95

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Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, Crop of 1958--Continued

Variety	:	Deltapine 15		
State	:	Texas		
Market area	:	Sugarland		Victoria
Percentage of variety at gin	:	98	:	94
Period of harvest	:	Early	:	Early : Midseason
RAW COTTON QUALITY	:	:	:	:
Classification (official standards)	:	:	:	:
Grade-----designation:	SM	:	M	M
Staple length-----inches:	1-1/16	:	1-1/32	1-1/16
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	1.05	:	1.04	1.05
Uniformity-----ratio:	79	:	78	79
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading 1/:	4.6	:	4.4	4.4
Fineness (Causticaire)---ug/inch 2/:	4.6	:	4.1	4.4
Maturity ( " )-----index:	79	:	81	78
Fiber tensile strength (Pressley):	:	:	:	:
Zero Gauge-----1,000 p.s.i.:	82	:	81	82
" " -----grams per tex 3/:	40.6	:	40.1	40.6
1/8" " " " " :	22.2	:	22.7	21.7
Nonlint content: 4/	:	:	:	:
Visible waste-----percent:	0.6	:	2.0	1.5
Invisible waste-----" :	0.6	:	1.1	1.2
Total nonlint content-----" :	1.2	:	3.1	2.7
Color of raw cotton: 5/	:	:	:	:
Reflectance-----Rd:	73.5	:	75.0	73.7
Yellowness-----+b:	9.2	:	8.9	8.7
Sugar content-----percent:	0.3	:	0.7	0.6
Acid-alkaline value-----pH units 6/:	7.5	:	6.8	6.8
PROCESSING RESULTS	:	:	:	:
Manufacturing waste:	:	:	:	:
Picker and card waste-----percent:	6.1	:	8.0	8.8
Neps-----per 100 sq. in. of card web:	10	:	13	14
Yarn skein strength:	:	:	:	:
22s (26.8 tex)-----pounds:	122	:	117	120
50s (11.8 " )-----" :	42	:	42	42
Average break factor-----7/:	2392	:	2337	2370
Yarn appearance:	:	:	:	:
22s (26.8 tex)-----grade:	B	:	B	C+
50s (11.8 " )-----" :	C	:	C	C
Average yarn appearance----index 8/:	100	:	100	95

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Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, Crop of 1958--Continued

Variety	Deltapine 15			Empire
State	Texas			
Market area	Raymondville	San Bonito	Brownsville	
Percentage of variety at gin	80	90	70	
Period of harvest	Midseason	Midseason	Midseason	
RAW COTTON QUALITY				
Classification (official standards)				
Grade-----designation:	M	SM		M
Staple length-----inches:	1-1/32	1-1/16		1
Fiber length (Fibrograph):				
Upper half mean-----inches:	1.04	1.04		1.02
Uniformity-----ratio:	81	82		78
Fiber fineness and maturity:				
Micronaire-----reading <u>1</u> /:	4.4	4.6		3.8
Fineness (Causticaire)---ug/inch <u>2</u> /:	4.5	4.5		4.0
Maturity ( " )-----index:	79	80		73
Fiber tensile strength (Pressley):				
Zero Gauge-----1,000 p.s.i.:	80	79		81
" " -----grams per tex <u>3</u> /:	39.6	39.1		40.1
1/8" " " " " :	21.5	20.5		20.4
Nonlint content: <u>4</u> /				
Visible waste-----percent:	1.1	1.2		1.1
Invisible waste-----" :	1.1	0.8		1.1
Total nonlint content-----" :	2.2	2.0		2.2
Color of raw cotton: <u>5</u> /				
Reflectance-----Rd.:	74.5	78.5		79.5
Yellowness-----+b.:	9.3	8.8		8.9
Sugar content-----percent:	0.3	0.6		0.2
Acid-alkaline value-----pH units <u>6</u> /:	7.0	6.8		7.0
PROCESSING RESULTS				
Manufacturing waste:				
Picker and card waste-----percent:	7.8	5.9		8.1
Neps-----per 100 sq. in. of card web:	12	10		19
Yarn skein strength:				
22s (26.8 tex)-----pounds:	117	119		111
50s (11.8 " )-----" :	42	40		39
Average break factor----- <u>7</u> /:	2337	2309		2196
Yarn appearance:				
22s (26.8 tex)-----grade:	C+	B		C+
50s (11.8 " )-----" :	C+	C		C
Average yarn appearance----index <u>8</u> /:	100	100		95

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Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour and a twist multiplier of 4.00, Crop of 1958--Continued

Variety	:	Lankart 57	:	Stoneville 7
State	:	Texas		
Market area	:	Corpus Christi		Raymondville
Percentage of variety at gin	:	98	:	75
Period of harvest	:	Early	Midseason	Midseason
RAW COTTON QUALITY	:	:	:	:
Classification (official standards)	:	:	:	:
Grade-----designation:	SM	:	SM	SM
Staple length-----inches:	31/32	:	31/32	1
Fiber length (Fibrograph):	:	:	:	:
Upper half mean-----inches:	.94	:	.94	1.02
Uniformity-----ratio:	81	:	81	82
Fiber fineness and maturity:	:	:	:	:
Micronaire-----reading 1/:	4.4	:	4.4	4.6
Fineness (Causticaire)---ug/inch 2/:	4.6	:	4.7	4.7
Maturity ( " )-----index:	78	:	78	80
Fiber tensile strength (Pressley):	:	:	:	:
Zero Gauge-----1,000 p.s.i.:	81	:	81	77
" " -----grams per tex 3/:	40.1	:	40.1	38.1
1/8" " " " " :	21.4	:	20.6	20.3
Nonlint content: 4/	:	:	:	:
Visible waste-----percent:	1.0	:	1.0	1.1
Invisible waste-----" :	0.9	:	1.4	0.9
Total nonlint content-----" :	1.9	:	2.4	2.0
Color of raw cotton: 5/	:	:	:	:
Reflectance-----Rd:	74.5	:	75.5	78.1
Yellowness-----+b:	9.3	:	8.8	8.4
Sugar content-----percent:	0.7	:	0.5	0.7
Acid-alkaline value-----pH units 6/:	6.8	:	6.9	7.0
PROCESSING RESULTS	:	:	:	:
Manufacturing waste:	:	:	:	:
Picker and card waste-----percent:	7.8	:	7.8	6.9
Neps-----per 100 sq. in. of card web:	16	:	18	9
Yarn skein strength:	:	:	:	:
22s (26.8 tex)-----pounds:	108	:	108	110
50s (11.8 " )-----" :	36	:	37	39
Average break factor-----7/:	2088	:	2113	2185
Yarn appearance:	:	:	:	:
22s (26.8 tex)-----grade:	B	:	C+	B
50s (11.8 " )-----" :	C	:	C+	C+
Average yarn appearance---index 8/:	100	:	100	105

FOOTNOTES

- 1/ Fiber fineness and maturity in combination as measured on untreated samples using the curvilinear scale for upland cotton.
- 2/ Fineness and maturity as determined by the Causticaire method using the Micronaire instrument.
- 3/ Tex is the universal unit for designating linear density of textile materials as adopted by the International Standards Organization (ISO). A tex unit equals the weight in grams of 1,000 meters of the material.
- 4/ As determined by means of the Shirley Analyzer.
- 5/ Determined by the Nickerson-Hunter Colorimeter on raw stock.  $R_d$  values indicate percent reflectance from 0 to 100 and  $+b$  values indicate degree of yellowness.
- 6/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation due to weathering or from the action of micro-organisms.
- 7/ Based on yarn skein strength (number x strength) of the two yarn numbers spun.
- 8/ Based on two numbers spun. Index of average quality equals 100.



